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Local Information Networks: Practical Requirements and Considerations

Paper # 2 for the Panel:
Information for Early Warning - the Use of Information Networks

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Abbreviations and Acronyms

| | |
|------------|--|
| CC | Country coordinator; for each LIN there is one local person in charge for collecting the information gathered by the FMs and for coding and transmitting this information to swisspeace via the internet. |
| FAST | Early Warning Project of swisspeace (FAST stands for " <i>Frühanalyse von Spannungen und Tatsachenermittlung</i> ") |
| FM | Field monitor; each LIN consists of at least two up to 10 FMs; it is their responsibility to collect information in a certain area and transmit it to the CC. |
| IDEA | Integrated Data for Event Analysis |
| IT | Information technology |
| LIN | Local information network |
| PANDA | Protocol for Assessment of Nonviolent Direct Action |
| SDC | Swiss Agency for Development and Cooperation |
| swisspeace | Swiss Peace Foundation; based in Berne (Switzerland) |
| VRA | Virtual Research Associates, Inc. |
| WEIS | "World Event Interaction Survey", a basic interaction category framework developed by Charles McClelland (1976). |

Abstract

The paper discusses **swisspeace** experience in the area of building and using local information networks (LINs) for early warning and conflict prevention. It outlines its peculiar event-data approach to early warning and highlights some LIN training and security aspects. Finally, it evaluates their strengths and weaknesses compared to alternative approaches.

1. Introduction: the need for local information networks (LINs)

1.1 Event-data analysis as a tool for early warning

For the purpose of this paper, as well as for FAST's early warning activities in general, is defined as follows:

"Early warning is not simply the sharing of information about an impending crisis, let alone the wail of a siren announcing the immanence of such a crisis. Early warning goes beyond collecting and sharing of information to include both analysis of the information and the formulation of appropriate strategic choices given the analysis (Adelman, 1997, 7)".

Successful early warning thus depends on a) sufficient and relevant information, b) analysis of this information, and c) formulation of policy options leading to early action (see Schmeidl and Bond, 2000). Event-data analysis has proven to be a promising approach to meet these criteria. The logic is fairly simple: all events considered relevant to conflict development are assigned a certain numeric value according to a distinct conflict scale. These values can then be added for specific time intervals and graphically displayed in a curve over time. This type of analysis of social, political, and economic variables has emerged over the last decade, spurred in large part by the pioneering efforts of the *Kansas Events Data System* (see Schrodt and Gerner, 1994), the PANDA project, and its re-fined versions (see Bond, Jenkins, Taylor, and Schock, 1997 and Bond, Bond, Oh, and Silva, 1999).

One of the main debates within the event-data based early warning community concerns the coding procedure of information, *i.e.* the question whether human-assisted or automated coding provides more accurate results. The advantage of the automated approach is that the number of events coded is relatively high and the coding procedure is fairly consistent. Thus, statistical analysis of the data can become powerful due to the large number of cases available for analysis. In contrast, the human-assisted coding approach allows selecting and monitoring the information required in a precise way, but it is time consuming and expensive. Both coding models inevitably produce errors, but machine-made errors are of a systematic nature and thus easier to trace and eliminate than those made by humans. The still unsatisfactory low number of cases in both coding models initiated the elaboration of new statistical methods to increase the significance of the analysis (see King and Zeng, 2001). However, those who refused to accept this basic limitation of event-data analysis have begun to search for alternative modes of data selection.

In this paper we argue that local information networks (LINs) combined with event-data analysis are a promising answer to the aforementioned shortcomings, as they pool the advantages of both automated and human-assisted event-data methods.

1.2 The FAST early warning project

swisspeace launched a political early warning project called FAST (*"Früh-Analyse von Spannungen und Tatsachenermittlung"*) in 1998. The driving force behind creation of the FAST project was the destructive experience of violent conflicts in the post-Cold War era that led to immense human suffering as well as loss of investment and enormous, high-cost post-conflict emergency requirements. In order to prevent such humanitarian crises **swisspeace** was mandated by the SDC to implement an early warning system for the anticipation of impending armed conflict and political crisis. Since the beginning, FAST has constantly diversified and expanded its activities. By the end of 2002, it is planned to cover more than 30 countries of particular interest to the SDC.

Based upon Adelman's definition of early warning (see above), it is FAST's goal to enhance political decision makers' ability to identify critical developments in a timely manner, so that coherent political strategies can

be formulated to either prevent or limit destructive effects of violent conflicts or identify opportunities to build peace. In keeping with this definition, FAST's activities encompass three crucial elements: First, information must be collected of relevance for conflict escalation or de-escalation. Second, this information must be analyzed. Third, based upon this analysis, policy options must be formulated to help design coherent political strategies to prevent or limit the destructive effects of armed conflicts. It goes without saying that the first element, the information-collecting process, is crucial, as the quality of a subsequent analysis and policy formulation depends heavily on the "raw data" quality.

1.3 Information needs for early warning purposes:

Any successful early warning system (be it quantitative or qualitative in a nature) depends on information that is:

- timely,
- truthful,
- salient,
- constant, accurate, and
- non-biased.

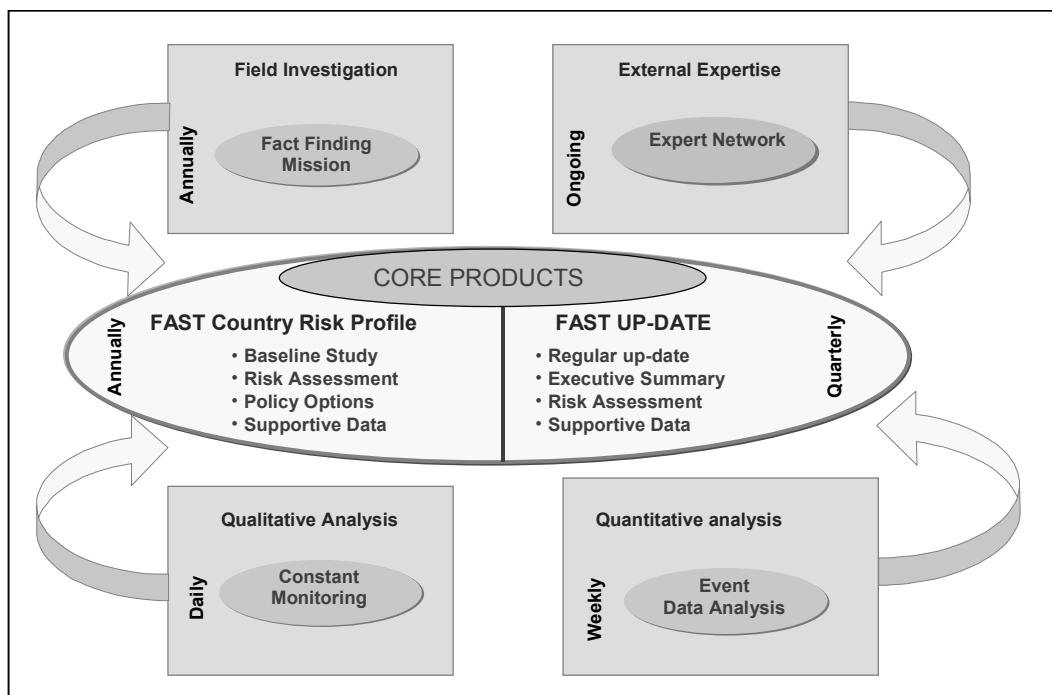
Although the number of information sources now available for quantitative early warning that might be used for this purpose has increased considerably over the last decade (mainly due to advances in new information technology), hardly any of these sources fulfill all the requirements stated above.¹ Therefore, the FAST project has chosen to set up *local information networks* (LINs) to establish suitable information sources for early warning purposes. The specific approach and problems related to its implementation are outlined below.

¹ Reuters Business Briefing, for example, primarily reports events only when a crisis has become imminent. This source, therefore, does not fulfil the criteria of timeliness and constancy (see Siegfried, 2001). Another example would be the so-called public information sources in the Central Asian countries: more than often, these sources are used primarily for government propaganda. Obviously, they do not live up to the non-bias criterion (*e.g.*, see Freedom House, 2000, 622f).

1.4 The FAST approach

Believing in a comprehensive approach and the benefit of using multiple methods, FAST combines qualitative and quantitative elements in its methodology (see Graph 1). This enables FAST to work comparatively and take advantage of the benefits of either method.

Graph 1: FAST's methodology:



More specifically, the various components of FAST's methodology can be briefly outlined as follows (for more detail, see Kruppenacher *et al.*, 2001):

A) Qualitative elements:

The qualitative components, necessary for maintaining a context-specific understanding of countries monitored, consist of the following elements:

- **Constant monitoring of events and developments:** Aside from tracking relevant literature and secondary sources for analytical purposes, daily monitoring of events and developments is carried out for each target country based on information gained from the LINs.
- **Local information network:** In addition to the provision of events relevant for quantitative event-data analysis (see below), the LINs also provide a different way of interpreting events and thus also function as outside advisors or experts to the FAST team of analysts.
- **International expert network:** Regular exchange with area experts from both within and outside the target region is crucial for the FAST analysis in order to discuss information received, gain analytical insight, produce case scenarios, and response options.
- **Fact-finding missions:** In order to obtain hands-on-knowledge, assess the situation on the ground, and make contact with local analysts, FAST analysts travel once a year to the region they monitor.

B) Quantitative elements:

FAST uses VRA's event-data analysis technique to supplement its qualitative analysis. Use of this quantitative tool has significant implications for early warning due to its consistency, transparency, speed, and interactivity. Automated event-data analysis promotes timely evaluation of information provided by the LINs and is thus extremely important for FAST's early warning purpose.

The basic procedure of FAST's event-data analysis approach is that all relevant events in a given country for a given period of time are first collected by FAST's *Field Monitors* (FMs). These events are later coded (according to a set of outlined indicators) and transmitted via the world-wide-web by *country coordinators* (CCs) to the Berne headquarters where the information is finally analyzed. Each event is automatically assigned a certain numerical value for a set of defined conflict relevant indicators (see below). By aggregating the data on a weekly or monthly basis, the information can be displayed graphically to give an accurate picture of overall conflict potential or stability in a given country (in the form of so-called *Tension Barometers*; for more information, see Siegfried, 2001).

2. Components of a local information network

LINs are the cornerstone of FAST's approach to early warning (see 1.4. above). Because of their unique features, we believe that information gained for early warning purposes surpasses the quality of existing information sources by far. Combined with event-data analysis² software developed by *Virtual Research Associates* (VRA), the *VRA Knowledge Manager*³, this approach has proven promising for nearing the goal of effective and efficient early warning. The process of establishing LINs is outlined in more detail below:

2.1 Who is needed?

Installing a LIN means setting up both local capacities in the target country and a supervising headquarters in the network's home country. The FAST LIN thus distinguishes between country coordinators (CCs), field monitors (FMs) (both in the target country), and research analysts with supervisor and country desk responsibilities in the headquarters country.

Country coordinator (CC)

Each target country hosts a local CC hired by **swisspeace**. The CC is the central contact person for FAST and

- is responsible for overall functioning of all LIN parts in the target country
- recruits FMs in his/her own name (see 2.1.2. below)
- evaluates the quality of each FM's data and sanctions them if needed
- codes the events with the VRA Reporter software and is therefore responsible for an absolutely essential part of the LIN.

All these tasks and responsibilities require that CCs are properly skilled and trustworthy. FAST therefore formulated basic requirements for country coordinators who were designed to ensure the LIN's proper functioning and a qualitatively sound event database (see FAST 2001). The basic requirements comprise minimal criteria in the CC's fields of education (including political expertise and analytical skills), language skills, IT knowledge, independence, and neutrality (see Appendix 1).

² For more information on the event-data analysis technique used, see Siegfried, 2001, 14-21.

³ For more information on this web-based information management tool, see <http://vranet.com/main.html>.

Field monitors (FMs)

Each CC employs a certain number of FMs whose task is to collect relevant open source information and to submit it to the CC. The number of FMs depends on the size of the monitored country but usually varies between three and ten. The FM's focuses mainly on recognizing relevant information. Hence analytical skills and insight in the country's political structures and developments are a basic requirement. However, unlike the CCs, FMs do not need to be skilled in use of the VRA coding software or IT in general. Nor do they need specific language knowledge other than being able to communicate properly with the CC (see Appendix 2). The FMs are supervised by their CC who also has unrestricted authority to replace any FM with insufficient job performance at any time.

Supervisors at headquarters

Headquarters supervisors constantly monitor the CCs' performance and consult them if technical or other problems arise. Supervisors act as general contact persons for CCs and are responsible for:

- checking the quality of reported events
- checking the quantity of reported events
- submitting periodically an overall evaluation to the project director on the CCs' job performance and the functioning of the LIN
- making sure that CCs receive their salary on time
- referring all insolvable problems either to VRA (technical problems with the software) or to the project director (all other questions).

The supervisor must have a university degree in the field of social sciences and/or international relations, in-depth expertise of the region he or she is monitoring, and additional skills in statistics.

2.2 What is needed?

Both supervisors at headquarters and CCs use the latest versions of the VRA coding software. The CCs and headquarters working stations also need basic technical equipment including:

- a modern PC system,
- a reasonably fast internet connection,
- an e-mail account as well as a phone and fax number for daily communication.

The following is also indispensable at headquarters:

- a backup server with a high-capacity hard-disk to have quick access to the data and to be capable of saving the huge event-data time series, and
- IT support capacities.

The FMs' technical equipment is less important and depends on the mutual agreement between the CC and FM: If the CC agrees to transmit event information by phone or fax, the technical requirements remain at this very basic level. However, transmission via surface mail or through personal meetings with the CC is excluded by the FMs' basic requirement listing (see Appendix 2).

2.3 How much does it cost?

An approximation of the costs to set up and run a LIN is given in the following. Of course, costs vary depending on the country's size, its location, and the level of LIN scrutiny. The following calculation refers to an average-size country, including one CC, three FMs, and a supervisor (part-time) in Switzerland:

Setting-up costs for one LIN

| Item | Amount in US\$ |
|--|-----------------|
| Training Workshop for CC (5 days) ⁴ | \$3,800 |
| Contribution to IT setup costs for CC | \$1,000 |
| Test period (three months of running costs) | \$5,200 |
| Overhead for swisspeace (approx. 10%) | \$1,000 |
| Total | \$11,000 |

Running costs for one LIN per year (everything included)

| Item | Amount in US\$ |
|--|-----------------|
| Salary CC | \$6,600 |
| Salary three FMs | \$2,700 |
| Internet / Telephone costs of CC | \$1,000 |
| Salary part-time supervisor in Switzerland | \$8,700 |
| Salary Expert network | \$500 |
| Overhead for swisspeace (approx. 10%) | \$2,000 |
| Total | \$21,500 |

3. Functioning of local information network

3.1 Work procedure

The prerequisite for a functioning LIN is constant interaction between both FMs and CCs in order to ensure a supply of quantitatively good information coverage and between supervisors and CCs in order to enhance and maintain overall LIN quality. Based on such open interaction – mostly by e-mail or phone – in which all sides can always give feedback when problems arise in applying software or coding instructions or the quality of reported events (see 3.3. below), the usual work process comprises the following elements:

1. FMs report events to the CC (a minimum of one coded event per day per FM).
2. CC assesses relevance of events reported and selects what to put on the **swisspeace** Reporter. At least once a week, the CC submits the coded events via Internet to headquarters.
3. The headquarters supervisor checks the quantity and quality of coded events (assessment of each event with new CCs; random checks with experienced ones).
4. As every coded event has an attached "comments" box in which the CC must describe the event (see 3.2. below), supervisors can assess the adequacy of codes chosen by the CC and change them autonomously if necessary.

⁴ Training workshops for CCs are organized on a regional base.

5. Should questions persist (*e.g.*, when the event description in the comment box is missing or incomplete), the supervisor confers with the CC by e-mail or phone to clear up any misunderstandings.
6. After having checked the coding quality, the data is ready to be analyzed and used for early warning purposes.

3.2 Coding instructions

It is the CCs' responsibility to collect and code all salient events for a given time span and location. A salient event is any event (political, social, economic, environmental) that has relevance to the escalation or de-escalation of local, national, regional, or international conflict. It should be stressed that FAST is not only interested in violent events, but also those events that contribute to an easing of tension, the de-escalation of conflict, and/or peace-building.

In general, each event can be checked along the following dimensions: it must have an **initiator** (who?), a **certain action/happening** (what?), a **recipient** (whom?), must be **located in time** (when?) **and space** (where?) in order to be "codable" (see FAST, 2001). Any events that lack one of these essential characteristics cannot be coded and must thus be left out.⁵

Each event is first assigned to one specific event type which the CC can select from a defined list of possible event types.⁶ For each event the CC must also provide detailed information for each event. It is then coded with the help of a reporting mask (drop-downs) according to defined criteria.

Graph 2: Reporting mask

| By FAST In Switzerland On Donnerstag, 7. März 2002 | | | |
|--|------------------|---|---------------------------------|
| Event | | Protest demonstrations | Event Location: Uzbekistan |
| Initiator | + | Uzbekistan farmers groups | |
| Recipient | + | Uzbekistan national executive countries | |
| Informer | + | | |
| Event Count | Geographic Scope | Event Status | Event Credibility |
| Single | Localized | Completed | Certain-Personally Eyewitnessed |
| Injuries | Casualties | Deaths | Domain |
| None | None | None | Contentious |
| Sanction | Damage | Altruism | Violence |
| Ambiguous | Minor | None | Minor |
| Comments | | | |
| Event description | | | |

⁵ For instance, a general decline in living conditions as such is not considered as an event, as it lacks an initiator.

⁶ This list is based on the original WEIS scale and has continuously been expanded. At present, it consists of 199 IDEA events. Please refer to the IDEA website for full descriptions (<http://vranet.com/idea>).

The necessary detailed information concerns the following categories:

- **Initiator, recipient, and informer** of event (association, sector, literal name)
- **Event location** (*i.e.*, states and provinces)
- **Event count** (specifies whether the event in question was singular or multiple)
- **Demographic scope** (used to identify the scope of the event)
- **Event status** (this category identifies whether the event is completed, ongoing, or planned)
- **Event credibility** (refers to the credibility of the report)
- **Physical injuries** (used to specify the scope of physical injuries)
- **Deaths** (used to specify the number of casualties that occurred)
- **Domain** (the indicator for contentiousness and distinguishes between those actions handled within routine conflict-resolution procedures as opposed to those direct actions that bypass routine conflict-resolution procedures)
- **Sanction** (captures the level of sanction, *i.e.*, significant social, economic, or political costs threatened or imposed on someone)
- **Damage** (captures the level of material damage caused by the event)
- **Altruism** (captures the level of altruism on the part of the initiator)
- **Violence** (captures the level of violence associated with the event)
- **Comments** (a text box used to give a short, narrative description of the event)

All these details are used in analyzing information provided and creation of specific tension barometers.

3.3 Quality control and evaluation

As mentioned before, headquarters supervisors are entrusted with quality control of the CCs' coding performance. The control encompasses both quantitative and qualitative aspects of coding work and is carried out on a weekly basis. The aim of periodic quality checks is to improve both the validity and reliability of reported information. The following table lists the main focuses of quality control and the measures taken.

| Main focuses of quality control | Measures taken for quality improvement |
|---|--|
| Ensuring the <u>quantity</u> of reported events (a significantly large number of cases is essential for a solid statistical base) | <ul style="list-style-type: none"> ▪ Careful selection of CCs according to the basic requirements (see Appendix 1) ▪ Training workshops for CCs to improve efficient coding ▪ Minimum requirement of the number of coded events per day ▪ Financial sanctions for the CC if the quality and the quantity of events is not attained ▪ Appropriate remuneration |

| | |
|--|---|
| <p>Ensuring the <u>validity</u> of the reported events:</p> <ul style="list-style-type: none"> ▪ Did the reported events actually take place? ▪ Are the reported events relevant for early warning purposes? ▪ Does the CC use the appropriate codes for the reported events? | <ul style="list-style-type: none"> ▪ Careful selection of CCs according to the basic requirements (see Appendix 1) ▪ Training workshops for CCs improving event selection and application of VRA Reporter software codes to the selected events ▪ Coding guidelines in the FAST Coding Handbook ▪ Intensive interaction between CCs and supervisors enabling permanent training and learning ▪ Assessment of coded event relevance by reading the CC's event description, <i>i.e.</i>, the "comments" box ▪ Parallel checks of coded events with events reported by available online sources (<i>e.g.</i>, local newspapers and news wires, Reuters, BBC, AFP) and with information provided by regional experts ▪ Random checks of the CC's event codes |
| <p>Ensuring the <u>reliability</u> of the reported events:</p> <ul style="list-style-type: none"> ▪ Is the CC's reporting consistent? | <ul style="list-style-type: none"> ▪ Careful selection of CCs according to basic requirements (see Appendix 1) ▪ Training workshops for CCs ▪ Coding guidelines in the FAST Coding Handbook ▪ Intensive interaction between CCs and supervisors enabling permanent training and learning ▪ Random checks of CC's event codes |

Besides the quality control and evaluation by headquarters, the CCs evaluate their own activities, the work of their FMs, application of VRA software, and collaboration with FAST on a half-year basis, thereby giving important hints for future improvements of the LIN's functioning.

3.4 Security aspects

The LINs' setup and maintenance in developing countries reveal many security concerns. Particularly in countries with non-democratic regimes and strict control of information flow, the local LIN staff may risk prosecution for what local prosecutors will call spying. The fact that the LINs are administered from abroad is likely to increase the local authorities' suspiciousness towards the LIN staff and the organization running them.

Being aware of potential security problems is one aspect; taking appropriate measures to minimize these risks is another. The range of possible measures depends largely on what kind of organization operates the LIN. While state actors like development agencies or foreign ministries have a wide variety of diplomatic instruments to "convince" the target country to support (or at least) tolerate the presence of a LIN on its territory, non-state actors have no such influential channels at hands. The possibilities for NGOs to

guarantee the security of the LIN staff are small, even if they are formally mandated by an official state actor. The FAST project's security policy includes the following points:

- FAST only hires CCs with profound knowledge of and insight into the target country's institutional and political framework. This ensures that the local LIN staff is fully aware of political and cultural "DOs and DON'Ts" while doing their work for the LIN.
- CCs are strictly advised to adhere exclusively to open sources and to refrain from any activities that could be interpreted as espionage or intelligence.
- Local LIN staff members are informed that they should refrain from any activities that could bear serious security threats.
- The names of FMs are known to the CCs only.
- FAST refrains from divulging any personal details of the local LIN staff to organizations other than FAST clients. In regions where the security situation is particularly tense, the work of the LIN staff is currently linked to the SDC's local coordination offices in order to improve the position of LIN collaborators.

Fortunately, no serious security incident has happened so far, and no LIN collaborators have been detained or mistreated by local authorities. If this were to happen, FAST would use the political influence of FAST clients in the target country to unravel the situation. However, up to now the LIN staff has never suffered any serious security incidents. This can indeed be interpreted as successful implementation of FAST security precautions.

4. Conclusion: strengths and weaknesses of local information networks

After three years of experience, certain strengths and also weaknesses regarding use of LINs for event data and early warning purposes have become apparent and can be summarized as follows:

4.1 Strengths

1. Information gathering process can be directed

As supervisors are responsible for selecting, training, and supervising the CCs' works, the information-gathering process can be directed to specific issues of interest. Although we must be careful not to restrict the CCs' focus to a defined set of events (*e.g.*, military or criminal events), the main areas of interest for early warning purposes can be defined and specified.⁷

2. Information is available in near "real time"

Timeliness of information is a main prerequisite for successful early warning. Although some progress has been made in speed of data transmission due to the Internet, traditional news wires meet this requirement only up to a certain degree. As the CCs must be in constant contact with their FMs and as reporting over the Internet is requested on at least a weekly basis, the time lag between the actual event and its reporting over the Internet can be reduced to a minimum.

⁷ In contrast, *Reuters Business Briefing*, for example, has a distinct business perspective and only reports those events with a greater connotation at the national level. Yet this eliminates a lot of important events at a district or provincial level that are of importance for political early warning.

3. Hate news can be avoided

Use of potential "fabricated" or "hate" news for early warning purposes clearly limits the potential of early warning systems relying on open public information sources. Due to supervisor's quality control of the CCs' work, strict selection procedures used by CCs and FMs, the mutual trust relationship between supervisor and CC, and exhaustive CC training courses, the FAST LINS' degree of information credibility is especially high.

4. Negative impact of "media attention" can be avoided

No one would doubt that some events are more likely to be reported by the media than others because of their "news value".⁸ The naïve premise that news media simply mirror a world "out there" from "nobody's point of view" has become an almost trivial statement. Everybody knows that newspapers deal with manufactured news and not actual events as such. However, the following factors related to "news value" limit the quality of early warning systems that rely on open information sources provided by news agencies:

- Certain areas lack coverage by English-speaking news agencies because the regions are not considered relevant enough from a Western point of view. Consequently, this sort of event-data analysis performs poorly in areas that journalists cover haphazardly.
- War weariness leads to the intensity of news media coverage increasing as a crisis occurs or is already ongoing ("War sells!") but are weak or non-existent during more peaceful times. Thus smaller events signaling conflict-escalation may not be reported at all by journalists – and what journalists miss, event-data analysis misses as well.

Using LINS as an information source for event-data analysis avoids the negative impact of news media inattention: The LINS collect information about a certain region (be it a visible or a forgotten "hot spot") regardless of its news values.

5. A western-bias can be avoided

International journalism is based on the principles of covering certain events in regions believed to be of general interest to the rest of the world. The result of this Western bias is that certain events of high relevance for conflict escalation may not be noted (and therefore go unreported) by foreign journalists due to the lack of context sensitivity. This is especially important because the meaning of a certain event may differ considerably depending on the cultural and political context.⁹ As FAST employs only local people who are responsible for collecting and selecting raw data for subsequent analysis (see above), such blind spots can be avoided.

⁸ Yet these values do not exist in actual events but are always influenced by journalists. Carruthers (2000, 15f) notes that "(...) news editors sometimes suggest that their job is rather like judging a beauty pageant: potential stories parade their easily-evaluated assets under the trained gaze of the judge, waiting to be plucked from the crowd of contestants and elevated to a place in the press columns or broadcast bulletin. But like notions of beauty, newsworthiness is also in the eye of the beholder, not an inherent property."

⁹ Whereas a *protest manifestation* might be fairly common, *e.g.*, in Italy, the same event has a completely different significance than, *e.g.*, in Central Asian countries.

6. Information is available in an easy-to-read and "digestible" format

The LINS and event-data analysis software developed by VRA are closely interwoven with each other. This interplay is beneficial for both the FAST supervisors and the end user of our products: because of the software tool, important information can be displayed instantly and summarized in a graphic format (the so-called *tension barometers*), illustrating specific aspects of a given conflict situation in one graph (at a minimum). This feature is especially relevant for our products' end users, mainly policy makers who are too busy to read lengthy reports for a given conflict situation. Thus the display of a large amount of unsystematic information in an easy-to-read and easy-to-access manner that adds credibility to the overall assessment of a conflict situation is a major strength of the combined LINS/VRA approach.

7. LINS are more than just an ordinary information source

Of course, the LINS' main output are events collected, coded, and transmitted to **swisspeace**. However, based on our experience, the LINS have turned out to be of additional use to analysts: often, when information is needed that cannot be obtained from any other sources, the CCs and FMs have served as a reliable information network that can be contacted for delivering instant background information that is equally important for early warning purposes.

8. LINS provide quality data for strong statistical analysis

As mentioned before, the number of cases obtained for a certain country and time span is relatively small when using traditional news-agency data. By using LINS, this number can be increased significantly, and the statistical analysis becomes more powerful, due to a larger number of cases reported for a given time period.

9. LINS contribute to capacity building in target countries

Due to ongoing interaction, training activities, and employment of local staff, FAST's activities contribute to capacity building in areas where LINS are set up.

4.2 Weaknesses

Apart from the major strengths of our approach, the following weaknesses have also become apparent through our work with LINS:

1. LINS and the corresponding human-assisted coding is labor intensive and costly

Based upon FAST's experience, the setup and running costs of LINS are relatively high. The reasons for this are obvious: first, the number of people involved at various levels (FMs, CCs, and supervisors) is substantial. Second, the energy and resources needed for training and supervising CCs/FMs is great. Thus, in order to achieve the goal of early warning, one needs financially strong and reliable customers.

2. Quality control of information provided poses difficulties

The quality control of information produced by the LINS poses difficulties: Although current information delivered can be verified easily, it is more difficult to assess whether **all** relevant information is reported for a certain period. As local information is difficult to obtain for most target areas, cross-check verification becomes a difficult enterprise.

3. Strong statistical analysis often requires data collected over a long time-span

Most statistical forecasting models require long time-spans to be reliable. This means that tension barometers (the LINs' end product) are only of limited use for statistical forecasting purposes in their early stages. Nevertheless, the LINs produce salient information for early warning purposes right from the start.

4.3 Conclusion

Use of LINs can be regarded as a solid approach for gaining relevant information needed for early warning purposes. Because of their unique characteristics, they supersede the quality of most (if not all) information sources available. In particular, LINs provide continuous and sufficient data without a Western bias upon which a solid early warning assessment can be based. Although this data is relatively expensive to obtain, we believe that such solid data is indispensable for effective and reliable early warning. Even if use of LINs does not solve analytical problems linked to forecasting conflict escalation or de-escalation processes as such (*e.g.*, see Doran, 1999), we see LINs as the only way to approach the fundamental purpose of political early warning: to prevent or limit destructive effects of violent conflicts.

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6. Appendix

Appendix 1: Basic requirements for FAST country coordinators (CCs)

Education/language skills

- Higher education (BA equivalent is essential, MA equivalent or higher is an advantage), preferably in social sciences or related fields.
- Good analytical skills in monitoring and reporting political, economic, and social events independently and reliably.
- Insight in local, regional, and national social/political/economic structures of the country as well as interest in political, social, and economic developments.
- Good English reading and writing skills.
- Good knowledge of national language(s).
- Ability to translate reports from local language into English.
- Knowledge of regional languages is an advantage.

Computer Skills/Access

- Experience with computers and computer software (word processing).
- Experience in use of Internet and e-mail (knowing FTP is an advantage).
- Frequent, reliable, and safe access to computer for data storage is essential; own computer is desirable.
- Frequent, reliable, and safe access to internet connection for uploading the data is essential.
- Frequent, reliable, and unrestricted access to safe telephone and fax lines for communication with FMs is essential.

Other

- CCs must not be close relatives of ruling or influential political leaders.
- CCs should not be personally linked to governmental bodies such as intelligence services, the military, or police.

Appendix 2: Basic Requirements for Field Monitors (FMs)

Age

- Field Monitors (FMs) must be at least 20 years old when recruited or have attained the minimum legal age for the country (whichever is higher).

Education

- Should have good analytical skills and be able to monitor and report political, economic, and social events independently and reliably.
- Insight in local, regional, and national social/political/economic structures of the country as well as interest in political, social, and economic developments is absolutely required.
- Good reading and writing skills in national language(s) are essential.
- Good reading and writing skills in English is an added value but not required if CC can translate from the national language into English.

Access to means of communication

- FMs must have frequent, safe, and unrestricted access to at least one of the following means of communication: e-mail, fax, or telephone.

Other

- FMs must not be first-grade relatives of the country coordinator.
- FMs must not be close relatives of ruling or influential political leaders.
- FMs should not be personally linked to governmental bodies such as intelligence services, the military, or police.